

*Tuesday, August 29, 2017 3:22:51 PM*

**\*165814\***

Page 1

**Accept**

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Cust Item ID:**

**Start Date:** 9/11/2017      **Start Qty:** 1.00

**\*1\***

**Customer:**

**Required Date: 9/18/2017      Req'd Qty: 1.00**

**\* 1 \***

**Reference:**

~~AUG 30 2017~~

Run Start \*NR1\*

**Approvals:**                      **Process Plan:**

**Date:**

### Tooling:

Date:

Stop \*NR2\*

**QC:**

**Date:**

**SPC (Y/N):**

Date:

[illegible]

Work Order ID 165814

Tuesday, August 29, 2017 3:22:51 PM

\*165814\*

Page 2

Item ID: D5393-041 Accept \*N900040100\* Setup Start \*NS1\*  
Revision ID: Stop \*NS2\*  
Item Name: Strut Assembly  
Start Date: 9/11/2017 Start Qty: 1.00 \*1\* Cust Item ID:  
Required Date: 9/18/2017 Req'd Qty: 1.00 \*1\* Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |               |                  |                |
| *130*                          |                                             |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                        | 0.10                 |         |        |              |               |               |                  |                |
| Quality Control                |                                             |                      |         |        |              |               |               |                  |                |

17/9/19

DAS  
21  
9-89

SEP 14 2017

# Picklist Print

Tuesday, August 29, 2017 3:22:50 PM

Page 1

Work Order ID: 165814

**\*165814\***

Parent Item: D5393-041

**\*D5393-041\***

Parent Item Name: Strut Assembly

Start Date: 9/11/2017

Required Date: 9/18/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 16.02.01 NEW ISSUE DD VERF:JLM IPP  
REV:B 17.01.27 AS PER DWG REV.B2 DD VERF:JLM

| Component Item ID/<br>Item Name                   | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per<br>Kit | Total<br>Qty    | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|----------------|-----------------|---------------|----------------|--------|
| D2690-6<br><b>*D2690-6*</b><br>Lanyard            |                        | Manufactured  | No          |                     |                  | 100             | Each               | 31.0000        | 2              | 2               |               |                |        |
|                                                   |                        |               |             |                     |                  |                 |                    |                | **             |                 |               |                |        |
|                                                   |                        |               |             |                     | <u>Location</u>  |                 |                    | <u>Loc Qty</u> |                | <u>Loc Code</u> |               |                |        |
|                                                   |                        |               |             |                     | ST009            |                 |                    | 31             |                |                 |               |                |        |
|                                                   |                        |               |             |                     | 164454           |                 |                    | 13             |                |                 |               |                |        |
|                                                   |                        |               |             |                     | <u>165220</u>    |                 |                    | 18             |                |                 |               |                |        |
| D5393-043<br><b>*D5393-043*</b><br>Strut Weldment |                        | Manufactured  | No          |                     |                  | 100             | Each               | 0.0000         | 1              | 1               |               |                |        |
|                                                   |                        |               |             |                     |                  |                 |                    |                | **             |                 |               |                |        |
| AN3C3A<br><b>*AN3C3A*</b><br>Bolt                 |                        | Purchased     | No          |                     |                  | 100             | Each               | 80.0000        | 2              | 2               |               |                |        |
|                                                   |                        |               |             |                     |                  |                 |                    |                | **             |                 |               |                |        |
|                                                   |                        |               |             |                     | <u>Location</u>  |                 |                    | <u>Loc Qty</u> |                | <u>Loc Code</u> |               |                |        |
|                                                   |                        |               |             |                     | GA               |                 |                    | 7              |                |                 |               |                |        |
|                                                   |                        |               |             |                     | m136182          |                 |                    | 7              |                |                 |               |                |        |
|                                                   |                        |               |             |                     | ST350            |                 |                    | 73             |                |                 |               |                |        |
|                                                   |                        |               |             |                     | <u>m137820</u>   |                 |                    | 73             |                |                 |               |                |        |
| AN665-34R<br><b>*AN665-34R*</b><br>Clevis         |                        | Purchased     | No          |                     |                  | 100             | Each               | 22.0000        | 2              | 2               |               |                |        |
|                                                   |                        |               |             |                     |                  |                 |                    |                | **             |                 |               |                |        |
|                                                   |                        |               |             |                     | <u>Location</u>  |                 |                    | <u>Loc Qty</u> |                | <u>Loc Code</u> |               |                |        |
|                                                   |                        |               |             |                     | ST330            |                 |                    | 22             |                |                 |               |                |        |
|                                                   |                        |               |             |                     | m137710          |                 |                    | 12             |                |                 |               |                |        |
|                                                   |                        |               |             |                     | <u>m138238</u>   |                 |                    | 10             |                |                 |               |                |        |

DAS  
6  
9-89

SEP 13 2017

DAS  
6  
9-89

SEP 13 2017

DAS  
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9-89

SEP 13 2017

DAS  
6  
9-89

SEP 13 2017

# Picklist Print

Tuesday, August 29, 2017 3:22:51 PM

Page 2

Work Order ID: 165814

**\*165814\***

Parent Item: D5393-041

**\*D5393-041\***

Parent Item Name: Strut Assembly

Start Date: 9/11/2017

Required Date: 9/18/2017

Start Qty: 1.00

Required Qty: 1.00

MS17984-C405

Purchased

No

100

Each

6.0000

2

2

**\*MS17984-C405\***

Pin, Quick Release

\*\*

DAS

6

9-89

SEP 13 2017

Location

Loc Qty

Loc Code

over005

4

m138336

4

ST315

2

m137963

2

MS21043-3

Purchased

No

100

Each

758.0000

2

2

**\*MS21043-3\***

Nut

\*\*

DAS

6

9-89

SEP 13 2017

Location

Loc Qty

Loc Code

FG

80

103691

80

FP001

96

m136182

96

GA

45

m136182

45

ST302

537

m137587

37

m138040

500

MS21919WCF8

Purchased

No

100

Each

7.0000

2

2

**\*MS21919WCF8\***

Clamp

\*\*

DAS

6

9-89

SEP 13 2017

Location

Loc Qty

Loc Code

ST291

7

m137495

1

m138230

6

Tuesday, August 29, 2017 3:22:51 PM

Shop Packet Print

Page 2

# Picklist Print

Tuesday, August 29, 2017 3:22:51 PM

Page 3

Work Order ID: 165814

\*165814\*

Parent Item: D5393-041

\*D5393-041\*

Parent Item Name: Strut Assembly

Start Date: 9/11/2017

Required Date: 9/18/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

100

Each

4,042.000

4

4

\*NAS1149C0332R\*

\*\*

WASHER

Location

Loc Qty

Loc Code

FP001

2372

m137851

1838

m138237

534

GA

448

m136444

448

ST260a

1000

m138207

1000

ST266

222

m137381

222

DAS  
6  
9-89

SEP 13 2017

NAS509-4C

Purchased

No

100

Each

9.0000

2

2

\*NAS509-4C\*

\*\*

NUT

Location

Loc Qty

Loc Code

ST551

9

M137963

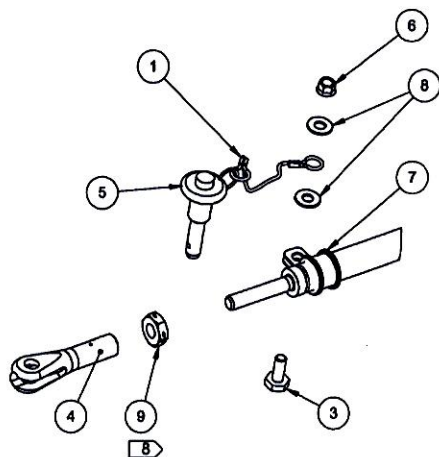
9

DAS  
6  
9-89

SEP 13 2017



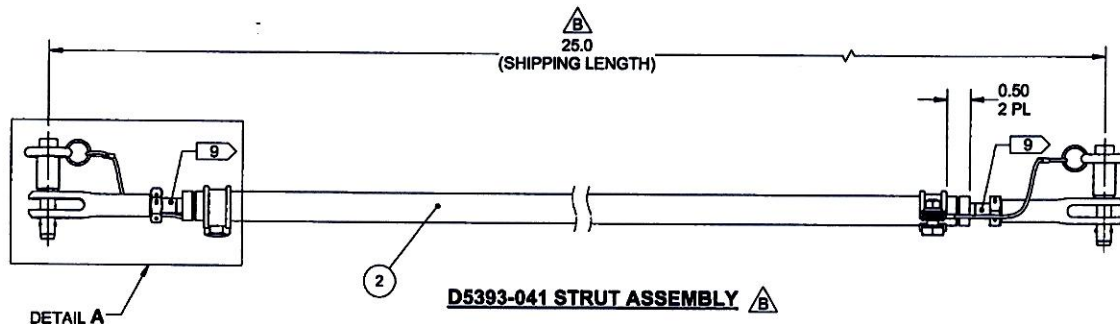
| ITEM | QTY<br>-041 | P/N           | DESCRIPTION        |
|------|-------------|---------------|--------------------|
|      | X           | D5393-041     | STRUT ASSEMBLY     |
| 1    | 2           | D2690-6       | LANYARD ASSEMBLY   |
| 2    | 1           | D5393-043     | STRUT WELDMENT     |
| 3    | 2           | AN3C3A        | BOLT               |
| 4    | 2           | AN665-34R     | THREADED CLEVIS    |
| 5    | 2           | MS17984-C405  | PIN, QUICK RELEASE |
| 6    | 2           | MS21043-3     | NUT, SELF-LOCKING  |
| 7    | 2           | MS21919WCF8   | CLAMP              |
| 8    | 4           | NAS1149C0332R | WASHER             |
| 9    | 2           | NAS509-4C     | NUT, JAM           |



DETAIL A  
2 PL

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.75 lbs
- 8) HAND TIGHTEN NAS509-4C NUT
- 9) USE TECTYL 502C CLASS I, MIL-PRF-16173E GRADE 2 OR EQUIVALENT ANTI-SEIZE COMPOUND ON THREAD



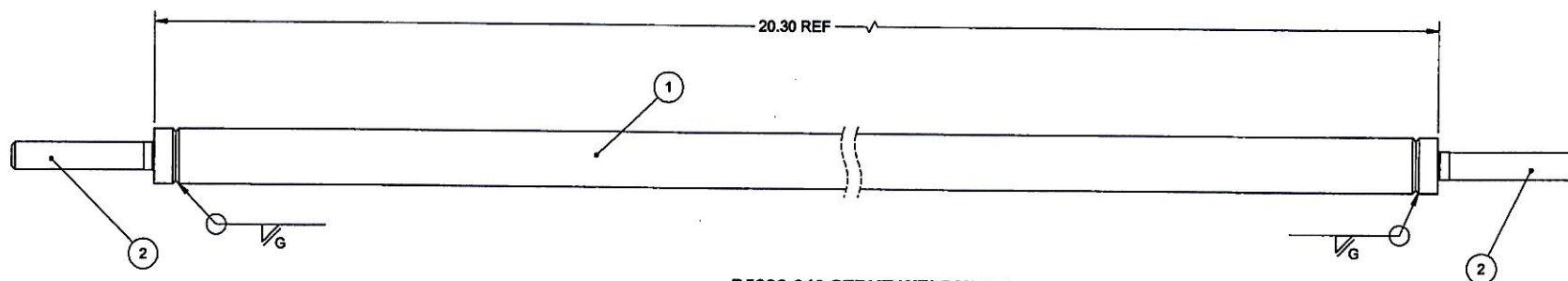
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 165814

AUG 30 2017

RELEASED  
2017-02-10  
ECN 17-305  
522

|            |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                          |        |              |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------|
| B          | SHEET 1: ITEMS 4 & 9 WERE IN -043. REMOVE TORQUE NOTE (TORQUE TO BE APPLIED ON INSTALL). SHEET 2 HAND TIGHTEN NOTE FOR NUT MOVED TO SHEET 1. SHEET 3: 19.90 DIM WAS 20.40. SHEET 4 ADDED -3. REASON: NCR16-8129 |                                                                                                                                                                                                                                                                          | AJS    | 16.12.19     |
| A          | NEW ISSUE                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                          | RF     | 16.01.27     |
| REV.       | DESCRIPTION                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                          | BY     | DATE         |
| DESIGN     | RF                                                                                                                                                                                                              | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                        |        |              |
| DRAWN      | NO                                                                                                                                                                                                              | DRAWING NO.<br>D5393                                                                                                                                                                                                                                                     | REV. B | SHEET 1 OF 4 |
| CHECKED    | AJS                                                                                                                                                                                                             | TITLE<br>STRUT ASSEMBLY                                                                                                                                                                                                                                                  |        |              |
| MFG. APPR. | DD                                                                                                                                                                                                              | SCALE<br>NTS                                                                                                                                                                                                                                                             |        |              |
| APPROVED   | WM                                                                                                                                                                                                              | DATE<br>16.12.19                                                                                                                                                                                                                                                         |        |              |
| DE APPR.   | DS-#                                                                                                                                                                                                            | COPYRIGHT © 2016 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |        |              |

| ITEM | QTY | P/N       | DESCRIPTION    |
|------|-----|-----------|----------------|
|      | X   | D5393-043 | STRUT WELDMENT |
| 1    | 1   | D5393-1   | STRUT          |
| 2    | 2   | D5393-3   | STUD           |



**D5393-043 STRUT WELDMENT**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.51 lbs
- 8) WELD PER DART QSI 004

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2017-02-10

APPROVED

|            |          |                                                                                                                                                                                                                                                                            |              |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | RF       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                   |              |
| DRAWN      | NO       |                                                                                                                                                                                                                                                                            |              |
| CHECKED    | AJS      | DRAWING NO.                                                                                                                                                                                                                                                                | REV. B       |
| MFG. APPR. | DD       | D5393                                                                                                                                                                                                                                                                      | SHEET 2 OF 4 |
| APPROVED   | WM       | TITLE                                                                                                                                                                                                                                                                      | SCALE        |
| DE APPR.   | DS       | STRUT ASSEMBLY                                                                                                                                                                                                                                                             | NTS          |
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0.030 x 45°  
CHAMFER, 2 PL

Ø

19.90

**D5393-1 STRUT**

Ø 0.500  
REF

0.049  
REF

**NOTES:**

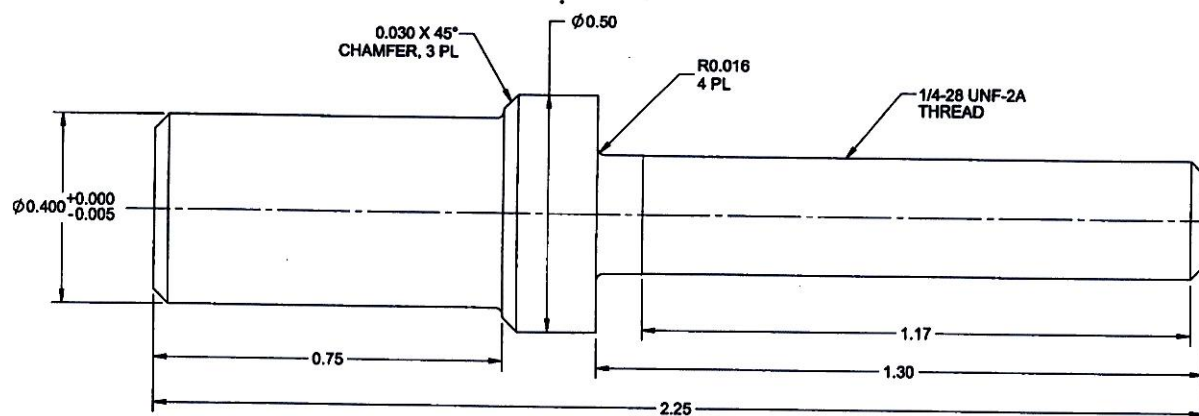
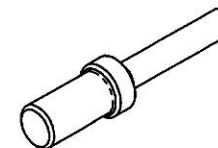
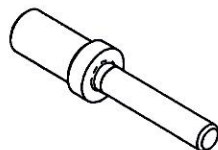
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SEAMLESS ROUND TUBING  
PER ASTM A213 OR ASME SA213 OR ASTM S269  
REF. DART SPEC M304TR0.500W.049
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.40 lbs

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2017-02-10

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|            |          |                                                                                                                                                                                                                                                                                   |              |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | RF       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                          |              |
| DRAWN      | NO       |                                                                                                                                                                                                                                                                                   |              |
| CHECKED    | AJS      | DRAWING NO.                                                                                                                                                                                                                                                                       | REV. B       |
| MFG. APPR. | DD       | <b>D5393</b>                                                                                                                                                                                                                                                                      | SHEET 3 OF 4 |
| APPROVED   | WM       | TITLE                                                                                                                                                                                                                                                                             | SCALE        |
| DE APPR.   | DS       | <b>STRUT ASSEMBLY</b>                                                                                                                                                                                                                                                             | NTS          |
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**D5393-3 STUD**

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR  
PER ASTM A276  
REF. DART SPEC M304R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.06 lbs

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2017-02-10

APPROVED

|            |          |                                                                                                                                                                                                                                                                    |              |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | RF       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                          |              |
| DRAWN      | NO       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                        |              |
| CHECKED    | AJS      | DRAWING NO.                                                                                                                                                                                                                                                        | REV. B       |
| MFG. APPR. | DD       | D5393                                                                                                                                                                                                                                                              | SHEET 4 OF 4 |
| APPROVED   | WM       | TITLE                                                                                                                                                                                                                                                              | SCALE        |
| DE APPR.   | DS       | STRUT ASSEMBLY                                                                                                                                                                                                                                                     | NTS          |
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